UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/104,123	06/24/1998	ROBERTO J. RIOJA	97-2301	3884

7590 08/07/2002

ALUMINUM COMPANY OF AMERICA
ALCOA TECHNICAL CENTER
100 TECHNICAL DRIVE
ALCOA CENTER, PA 150690001

EXAMINER	
IP, SIKYIN	

ART UNIT	PAPER NUMBER
1742	18

DATE MAILED: 08/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MS

Office Action Summary	Application No.	Applicant(s)	
	Examiner	Group Art Unit	

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☑ Responsive to communication(s) filed on 5/24/02.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☑ Claim(s) 1-8, 12, 16-22, 26-37 is/are pending in the application.

Of the above claim(s)_____ is/are withdrawn from consideration.

☐ Claim(s)_____ is/are allowed.

☑ Claim(s) 1-8, 12, 16-22, 26-37 is/are rejected.

☐ Claim(s)_____ is/are objected to.

☐ Claim(s)_____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on_____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on_____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number)_____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received:_____.

Attachment(s)

☑ Information Disclosure Stat ment(s), PTO-1449, Paper No(s). 16

☐ Interview Summary, PTO-413

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Revi w, PTO-948

☐ Other_____

Office Action Summary

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-8, 12, 16-22, and 26-37 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-100 of copending Application No. 09/591,904. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed Al based alloy composition is overlapped by said copending Application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-8, 12, 16-22, and 26-37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. The limitation "a fracture toughness K_{R25} of at least 91.5 ksi√in" in claims 1 and 12 is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The phrase "at least" includes fracture toughness (K_{R25}) higher than 180 ksi√in (see instant Figure 8).

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 30-32 and 35-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

8. Claims 30-32 and 35-37 are indefinite because the instant specification fails to provide a standard for measuring the degree of closeness or proximity of the wording "substantially". In Seattle Box Co. v. Industrial Crating & Packing, 731 F.2d 818, 826, 221 USPQ 568, 573-574 (Fed. Cir. 1984).

Claim Rejections - 35 USC § 103

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-8, 12, 16-22, and 26-37 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5122339 to Pickens et al (PTO-1449, claim 1), USP 5211910 to Pickens et al (PTO-1449, abstract), USP 5259897 to Pickens et al (PTO-1449, abstract), WO 9532074 (abstract), WO 9212269 (abstract), or DE

2810932 (abstract). References are applied individually under 35 U.S.C. § 103.

12. The cited references disclose the features substantially as claimed. The disclosed features include the claimed Al base alloy. The difference between the reference(s) and the claims are as follows: the cited references do not teach to avoid formation of an Al_3Li phase or function of the Li ions to form clusters of atoms of solute. The cited references may not explicitly disclose the claimed fracture toughness. However, the instant alloy composition and tensile strength are overlapped by the cited references; consequently, the properties as recited in the instant claims would have inherently possessed by the teachings of the cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) and In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Overlapping ranges have been held to be a prima facie case of obviousness, See MPEP § 2112.01, In re Best, 195 USPQ 430, In re Malagari, 182 USPQ 549, In re Titanium Metals Corporation of America v. Banner, 227 USPQ 773 (Fed. Cir. 1985), In re Woodruff, 16 USPQ 2d 1934, and In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Response to Arguments

13. Applicant's arguments filed May 24, 2002 have been fully considered but they are not persuasive.

14. Applicants argue that the claimed composition possesses unexpected results. However, the unexpected results have not been shown in the instant specification. In re Burckel, 201 USPQ 67 and MPEP § 716. And it is unclear what alloying element has contributed to the alleged fracture toughness - at least 91.5 ksi√in.

15. Applicants argue that the examples of cited references have much higher Li content than claimed. But, the examples of the cited reference are given by way of illustration and not by way of limitation. In re Boe, 148 USPQ 507 (CCPA 1966) and In re Snow, 176 USPQ 328. Furthermore, applicants have not substantiated their position that the claimed Li range is critical.

16. Applicants argue that the cited references fail to disclose the claimed fracture toughness. But, the instant tensile strengths, alloy composition, and conventional heat treatment methods are overlapped by the cited references (for example, see USP '339 - Tables and Figures). Therefore, the claimed fracture toughness would have been inherently possessed by alloys of cited references.

17. Applicants argue that the alloy of USP '339 does not contain up to 1 wt.% Mn. But, applicants' attention is directed to col. 3, lines 40-51 which discloses grain

refining elements such as Mn could be added.

18. Applicants argue that the alloy of USP '339 contains Ag. But, in view of page 5, second full paragraph of the instant remarks that the phrase "substantially free of Ag" is supported by page 5, lines 23-25 of the instant specification which discloses Ag could be up to 2 wt.%. Therefore, in view of the passage pointed out by applicants, that the phrase "substantially free of Ag" is interpreted as up to 2 wt.% Ag.

19. Applicants' argument as set forth in page 7, third full paragraph is noted. But, about 1.1 wt.% Li reads on the claimed 0.99 wt.% Li. Furthermore, applicants do not provide evidence that the claimed Li content is critical.

20. Applicants argue that USP '910 teaches away from the claimed microstructure by forming (Al_2CuLi). But, the instant claims do not exclude the Al_2CuLi and applicants do not provide evidence that the claimed microstructure would not be formed in the alloy of USP '910 and other cited references of record.

21. Applicants argue that the USP '910 does not disclose the claimed fracture toughness. The examiner reiterates the response set forth in item 16 above. (See also Table VI and VII of USP '910 for the tensile strengths).

22. Applicants' argument with respect to Ag and Zn elements is noted. But, the examiner reiterates the response as set forth in item 18 above.

23. Applicants' argument with respect to USP '897, WO 9532074, WO 9212269,

and DE 2810932 is noted. But, the examiner reiterates the responses as set forth above.

24. Applicants argue that the Cu range of DE '932 is so broad. But, applicants do not provide evidence of the claimed Cu content is critical.

Conclusion

The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been meet by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06 (a) and 37 C.F.R. § 1.119.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone numbers are (703) 872-9310 (non-final Official Paper only), (703) 872-9311 (after-final Official Paper only), and (703) 305-7719

(Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
August 6, 2002